

ABSTRACT

The object of the present invention is to provide an aqueous dispersion that can give the required properties for a wide range of uses including electronic materials, magnetic materials, optical materials and polishing materials, and to provide an aqueous dispersion for chemical mechanical polishing (CMP slurry) that gives an adequate polishing rate without creating scratches in polishing surfaces. Another object of the present invention is, to provide a method for manufacture of semiconductor devices using a CMP slurry that can control progressive erosion due to scratches and the like during polishing and that can achieve efficient flattening of working films, and to provide a method for formation of embedded wiring. The aqueous dispersion or CMP slurry of the present invention contains polymer particles made of thermoplastic resins or the like, and inorganic particles made of alumina, silica or the like, wherein the zeta potentials of the polymer particles and inorganic particles are of opposite signs, and they are bonded by electrostatic force to form aggregates as composite particles. The aggregates are subjected to ultrasonic wave irradiation or shear stress with a homogenizer to give more uniformly dispersed composite particles.